



DELTA TRAILS

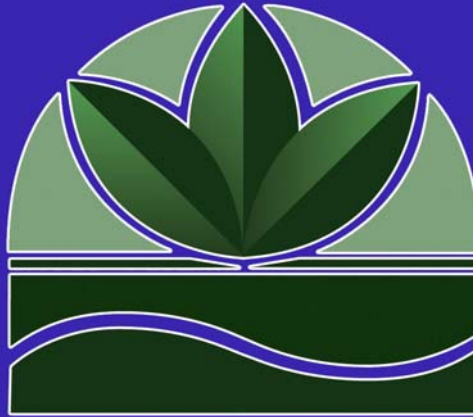
Delta Township

Non-Motorized Transportation Study

Preliminary Plan Presentation

January 29, 2004

Presented By:



LANDSCAPE ARCHITECTS & PLANNERS, INC.

Landscape Architecture

Site Design

Land Planning

Team Members:

- **Robert Ford, LAP**
- **Mike Bristor, LAP**
- **Roger Fox, LAP**

- **Jordan Dame, LAP**
- **Andy Linebaugh, LAP**
- **Bill Savage P.E.,
Savage Traffic Engineering**



Goals of the Study

- Provide a Basis for Non-Motorized Transportation
- Develop Primary & Secondary Routes
- Work with Local Agencies & the Community to Gain Insight into Specific Needs
- Connect to Other Non-Motorized Efforts in the Surrounding Area
- Connect Natural, Cultural & Scenic Features
- Promote Safety Throughout the Non-Motorized System



Review of Public Process

- Public Input Meeting – September 30, 2003
- Concept Plan Public Presentation - November 12, 2003
- ECRC Presentation – December 23, 2003
- Steering Committee – January 15, 2004
- Preliminary Plan Presentation – January 29, 2004



Health

U.S. Surgeon General

- 60% of American adults are not regularly active*
- 25% are not active at all*
 - **Rails-to-Trails: "Benefits of Trails and Greenways", The Trails and Greenways Clearinghouse, www.trailsandgreenways.org*
- Creating safe places for people to bicycle and walk is critical to persuading people to become more active**
- Trails provide a safe, inexpensive avenue for regular exercise for people**
 - ***U.S. Department of Health and Human Services, Physical Activity and Health*



Health

- Almost half of the 12-21 year olds are not vigorously active on a regular basis*
- 40% of all high school students are not even enrolled in physical education classes*
 - **(Centers for Disease Control, "CDC's Guidelines for School and Community Programs, Promoting Physical Activity", www.cdc.gov/nccdphp/dash/phactaag.htm, March 1977)*
- 25% of all trips made in the U.S. are less than one mile in length**
- 75% of those short trips are made by automobile**
 - ***Robert Wood Johnson Foundation (www.rwjf.org)*
- 10% of public school students walk to school today, based on data from the U.S. Centers for Disease Control



Health

U.S Centers for Disease Control and Prevention

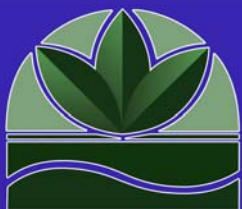
- 64% of the U.S population is clinically overweight and 31% are considered obese
- Conditions are due to a lack of physical activity
- Results can include increased heart disease, cancer, diabetes, anxiety, depression and other costly health problems *(Robert Wood Johnson Foundation (www.rwjf.org)).*
- Trails strengthen a community's ability to attract home buyers
- Trails provide employers a way to reduce health care costs
(USA Today 10/09/02)



Physical Activity Statistics

- 25% of all trips made in the U.S. are less than one mile in length, and 75% of those short trips are made by automobile
- The number of trips the average American adult takes on foot each year dropped 42% between 1975 and 1995
- Among children, walking trips dropped 37%. It is estimated that only 10% of public school students walk to school today, compared with a majority of students a generation ago. The most common means of transportation to school is by car

**Statistics provided by the leadership for active living, supported by the Robert Wood Johnson Foundation*



Newspaper Articles

Detroit tips scales as fattest city

Fitness magazine ranks city No. 1 in U.S. survey

Associated Press

HOUSTON — Houston has passed a weighty title to Detroit.

The nation's fourth-largest city (in terms of population, not pounds) is no longer the fattest, according to "Men's Fitness" magazine.

A jump in television viewing, a worsening commute time and a scarcity of gyms all helped tip the scales and

put Detroit at No. 1 this year.

"I think it's recognition that we're fat," Detroit Mayor Kwame Kilpatrick said.

"Our city is the automotive capital of the world. The culture here is you walk out of your house, you get in your car ... and you go where you're going."

But while the magazine dubbed Detroit the reigning king of flab, Houston still is packing plenty of extra pounds to keep it No. 2 on the publication's sixth annual survey. Houston had been the fattest city among a list of 25 three years running.

"Men's Fitness" uses 14

categories to determine the fattest cities, including the number of health clubs and sporting goods stores and the number of fast-food, ice cream and doughnut shops per 100,000 residents, air quality, climate, television viewing trends, and availability of health care.

Kilpatrick said he plans to run a marathon in the coming year and "will lead by example" when it comes to getting Detroit in shape.

"There's no better person to do it than the mayor — who stands about 6-4, 300 pounds — to say let's get out here and let's lose some weight and let's do it together," he said.

Fattest cities

Here are the Top 10 cities on the "Men's Fitness" list of 25 fattest cities. The number following the city name is last year's ranking:

1. Detroit (3rd last year)
2. Houston (1)
3. Dallas (9)
4. San Antonio (13)
5. Chicago (2)
6. Fort Worth, Texas (16)
7. Philadelphia (4)
8. Arlington, Texas (not listed last year)
9. Cleveland (6)
10. Columbus, Ohio (8)

1/3/04

U.S. teens fattest among industrialized nations, report says

Lack of exercise, fast food cited in Danish study

By LINDSEY TANNER
Associated Press

CHICAGO — Teenagers in the United States have higher rates of obesity than those in 14 other industrialized countries, including France and Germany, a study of nearly 30,000 youngsters ages 13 and 15 found.

Among American 15-year-olds, 15 percent of girls and nearly 14 percent of boys were obese, and 31 percent of girls

and 28 percent of boys were moderately overweight.

The findings are based on school questionnaires given to youngsters in the 15 countries in 1997 and 1998. The study was led by Inge Lissau, a researcher at the National Institute of Public Health in Copenhagen, Denmark, and was published in the January issue of Archives of Pediatrics & Adolescent Medicine.

The heaviest countries, based on data from 15-year-olds, also included Greece, Portugal, Israel, Ireland and Denmark.

U.S. teens were more likely than those in other countries to eat fast food, snacks and sugary sodas and were

more likely to be driven to school and other activities, contributing to a more sedentary lifestyle, said co-author Mary Overpeck of the U.S. Maternal and Child Health Bureau.

"The rest of the world may be catching up, but we're still in first place in a race that unfortunately we shouldn't want to be winning," said Dr. David Ludwig, an obesity researcher at Children's Hospital Boston who was not involved in the study.

Lithuania had the lowest obesity rates in the latest study. Among Lithuanian 15-year-olds, about 2 percent of girls and 0.8 percent of boys were obese, and 8 per-

Today's focus: Teen obesity

cent of girls and 5 percent of boys were overweight.

That is probably because Lithuania has fewer fast-food restaurants and its teens have less money to buy snacks and fast food, Overpeck said.

In some countries, such as Ireland, Portugal and Sweden, 13-year-old girls were more likely than 15-year-old girls to be obese.

Among French 15-year-olds, 4 percent of girls and almost 3 percent of boys were obese, and nearly 13 per-

cent of girls and 10 percent of boys were overweight. Among German 15-year-olds, about 5 percent of girls and boys were obese, and nearly 15 percent of girls and 14 percent of boys were overweight.

The other countries studied were Austria, Czech Republic, Flemish Belgium, Finland and Slovenia.

The World Health Organization last year said obesity is no longer mostly an American problem but is an increasing concern in Europe and other developed nations because people are abandoning traditional dietary habits and adopting more sedentary lifestyles.

Teen obesity rates rising

The nation's teenage obesity rate is higher than those in 14 other industrialized countries, a study of nearly 30,000 teenagers found. Officials say the prevalence of fast food in the United States contributes to the high rankings.

50% to 80% of obese teenagers become obese adults



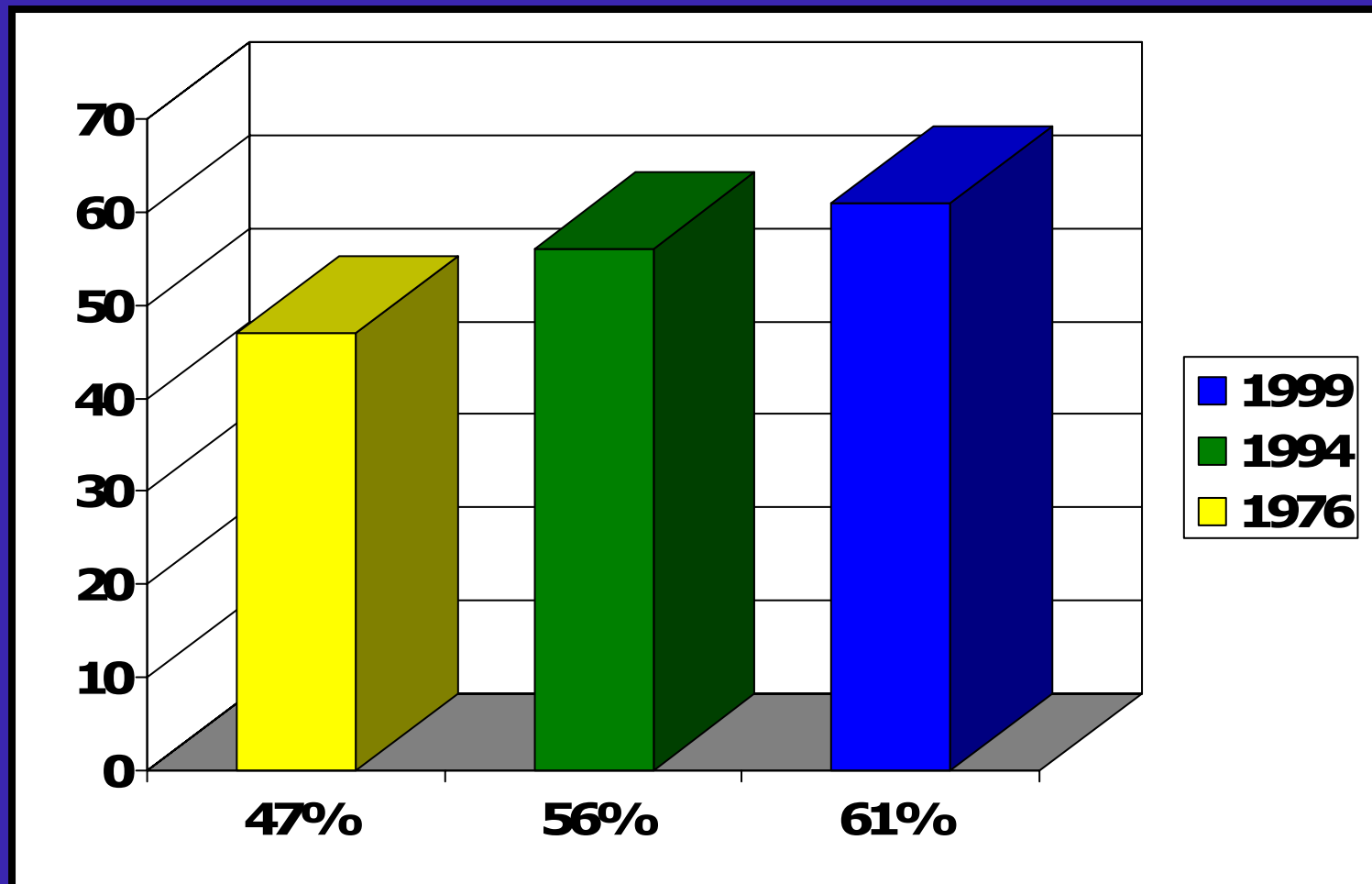
Source: Archives of Pediatrics & Adolescent Medicine

Associated Press

1/6/04



Overweight or Obesity Among Adults



**Statistics provided by the leadership for active living, supported by the Robert Wood Johnson Foundation*



Safety

372 Trails Studied

- Four separate studies conducted between 1979 and 1997 concluded that trails do not increase crime

Burke-Gilman Trail in Seattle, Washington

- Local police officers and residents were interviewed on the 12 mile urban trail
- Vandalism and burglary rates did not increase as a result of the trail
- Rate of vandalism and break-ins to adjacent property was well below the neighborhood average
- Separation from a criminals vehicle is a primary deterrent to crime



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Safety

372 Trails Study Continued...

- Out of 372 trails included in this study, RTC found only eleven trails in 1995 and 10 in 1996 that reported 3% crime incidence. These were the highest crime rates on the trails.
- When trails are compared to roads, parking areas and private places they are safer, according to the National Rail to Trails Conservancy



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Safety

372 Trail Study Continued...

- Letters from law enforcement officials attest that the actual volume of incidents such as graffiti, littering, sign damage and motorized use were minimal
- RTC found that the majority of the property crimes committed on trails had only a minor effect on the trail and usually did not harm the adjacent private property.
- This letter was submitted by a trail user
"Since the trail was constructed and opened for use we have found that the trail has not caused any inconvenience to property owners along the trail"
"The residents seem to enjoy having the trail near their homes"



Safety

372 Trail Study Continued...

- Addressing trail users safety and trail neighbors concerns about crime are critical to the creation of a successful trail
- The RTC report has shown that crime on rail-trails is not a common occurrence
- "The trail has not caused any increase in the amount of crimes reported. We have found that the trail brings in so many people that it has actually led to a decrease in problems."
"The increased presence of people on the trail has contributed to crime being reduced." Charles R. Tennant, Chief of Police, Elizabeth Township, Buena Vista, PA"



Safety

372 Trail Study Continued... Suburban Rail-Trails

- Incidents of graffiti and unauthorized motorized usage occurred less frequently on suburban rail-trails than urban trails. The number of suburban trails reporting crimes directly affecting adjacent property owners was significantly lower than the rates of trail vandalism
- The national rate of suburban burglary is 820 per 100,000 inhabitants; only one suburban trail reported a break-in to adjacent property in 1996
- 3% of suburban trails reported trespassing
- 17% of the suburban trails reported graffiti
- 24% of the trails reported littering
- 22% of the trails reported sign damage
- 14% of the suburban trails reported unauthorized usage

Rails to Trails Conservancy - Rail-Trails and Safe Communities, The experience on 372 Trails, 1998, Written by Tammy Tracy & Hugh Morris in cooperation with National Park Service – Rivers, Trails, and Conservation Assistance Program



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Safety

372 Trail Study Continued...

Rails to Trails survey found that the following type of trails have regular patrols

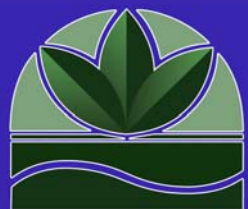
- 69% of urban trails
- 67% of suburban trails
- 63% of rural trails

Patrols of trails are accomplished by:

- 20% local police
- 16% county police
- 9% park rangers
- 4% state police
- 3% volunteers

Patrol Modes:

- 33% car and truck
- 26% bike



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Safety

372 Trail Study Continued...

- Bicyclists are more visible in bike lanes along road
- Bike lanes incorporated in the existing roadway system are safer than bicycles riding on the sidewalks because motorists can not always see bicyclists crossing driveways *(United States Department of Transportation, www.fhwa.dot.gov)*



Economics

- Greenway corridors provide a variety of amenities, such as attractive views, open space preservation, and convenient recreation opportunities
- This is reflected in increased property values and marketability for property located near open space
- Developers also recognize these values and incorporate open space into planning, design, and marketing a new and redeveloped properties
- Natural open space and trails are prime attractions for potential home buyers



Economics

National Park Service Study

- In “The Impacts of Rail-Trails,” landowners along three rail-trails reported that their proximity to the trails had not adversely affected the desirability or values of their properties
- Along the suburban Lafayette/Moraga Trail in California, the majority of the owners felt that the trail would make their properties sell more easily and add increased value. *(National Park Service and Pennsylvania State University, 1992)*



Economics

A survey of adjacent landowners along the Luce Line rail-trail in Minnesota

- 87% believed the trail increased or had no effect on their property value
- 61% of the suburban residential owners noted an increase in their property value
- Appraisers and real estate agents claimed that trails were a positive selling point for suburban residential property, hobby farms, farmland proposed for development, and some types of small town commercial property (*Mazour, 1988*)



Economics

An April 2000 survey

- Walking/jogging and bike trails were second on an amenity list of the “important to very important,” trailing only highway access (*Gopal Ahluwalia, Director of Research for the National Association of Home Builders; “consistently rank in the top five, www.nahb.com/news/smartsurvey2002.htm.”*)

A 1994 survey by American Lives, Inc.

- According to research conducted for the real estate industry, 77.7% of all home buyers rated natural open space as either “essential” or “very important” in planned communities. Walking and bicycling paths ranked third



Economics

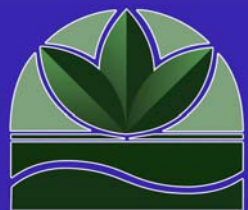
- Other surveys show property values are higher in areas within proximity to trails and greenways
- Seattle's Burke Gilman Trail in Ken Caryl, Colorado has (4145 homes), 9,000 acres, 6,000 acres set aside as open space, dozens of miles of multi-use trails, which link to amenities and a metro-wide system. The lots in developments adjacent to the trail had property values 7%- 15% higher than lots in similar developments not on the trail route. (*National Geographic – Sand Rozeboom, Rose and Company*)
- Increased participation in moderate physical activity by the 88 million inactive Americans could reduce medical costs by \$76 billion (*Pratt et. al, 2000*)



Economics

Benefits to Neighborhoods

- Real Estate values over the next 26 years will rise fastest in mixed-use, walkable communities
- Greenways increase property values nationwide *(1998 Study by the National Park Service)*
- Land next to a greenbelt in Salem, Oregon was worth \$1,200 more per acre than 1,000 feet away *(1992 Technical Information Series, Scenic America)*



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Public Input Meeting

September 30, 2003

Summary

- Distribute Input Surveys
- Safe Routes to School
- National Highway Traffic Safety Administration Statistics
- AASHTO Guidelines
- Sidewalks & Shared Use Paths
- Physical Activity Statistics
- Map Input Exercise –
Two groups: Waverly Middle School
Public Input Meeting



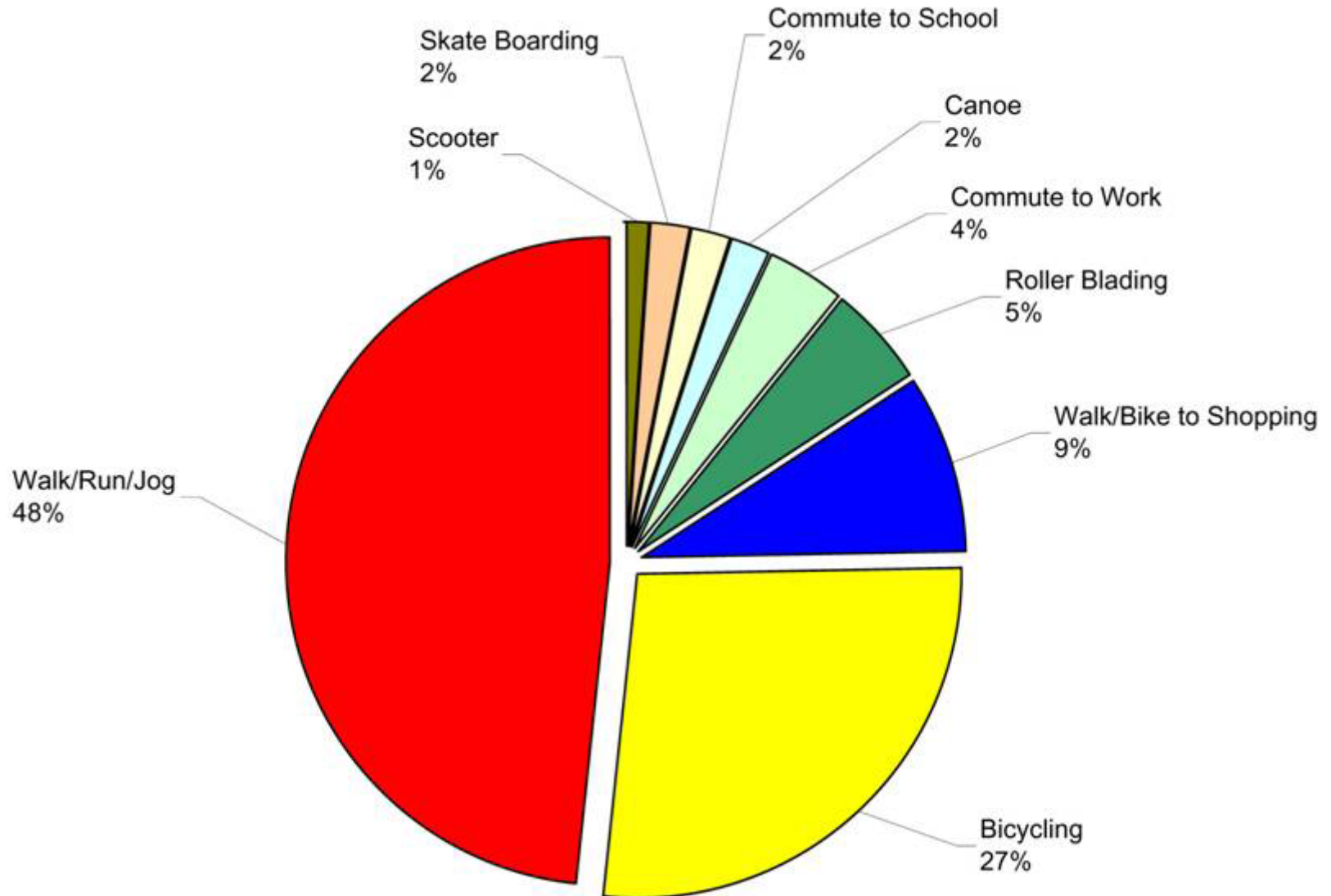
Data Review

- Input Surveys: Aug-Oct. 2003
 - 182 total responses
 - Mail
 - Web
 - Input Meetings
 - Newsletter

- Two Public Meetings: Sept 30, 2003
 - 147 responses
 - Public Map Exercise – 57 responses
 - School Map Exercise – 90 responses
(Waverly High School & Middle School Participants)

Non-Motorized Activities

Delta Trails Survey





Destinations from Public Input

Top 5 Responses

Public Input

1. Lansing Mall (27%)
2. Hunter's Orchard Park (21%)
3. Delta Mills Park (21%)
4. Grand Woods Park (17%)
5. Sharp Park (14%)

Student Input

1. Waverly Schools Campus (40%)
2. Lansing Mall (31%)
3. Meijer (18%)
4. Sharp Park (7%)
5. Library (4%)



Challenge Areas from Public Input

Top 5 Responses

Public Input

1. Willow Highway (31%)
2. St. Joe Highway (20%)
3. Creyts Road (17%)
4. Canal Road (17%)
5. Saginaw Hwy. & Elmwood Rd. (15%)

Student Input

1. Saginaw Hwy. & Elmwood Rd. (27%)
2. St. Joe Highway (24%)
3. Saginaw Highway (20%)
4. St. Joe Hwy. & Snow Road (15%)
5. Michigan Avenue (14%)



Sidewalks – Additional Requests

Top 5 Responses from Public Surveys

1. Willow Highway (31%)
2. St. Joe. Highway (25%)
3. Creyts Road (24%)
4. Canal Road (12%)
5. Saginaw Highway (8%)



Concept Plan Public Presentation

November 12, 2003



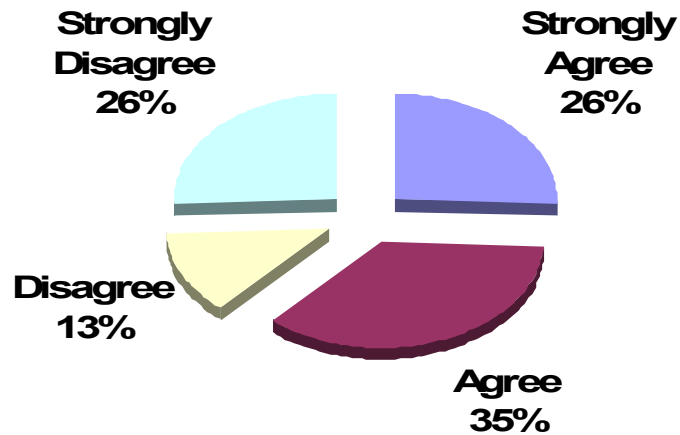
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Summary

- Review Data from Surveys
- Review Data from Map Exercise
- Present Mid-Block Crossing Concept
- Review Typical Lane Conversion Sections
- Present Concept Routing Plan
- Map Exercise to Review & Comment on the Concept Plan

Study/Results

What is your overall perception of the routing plan?

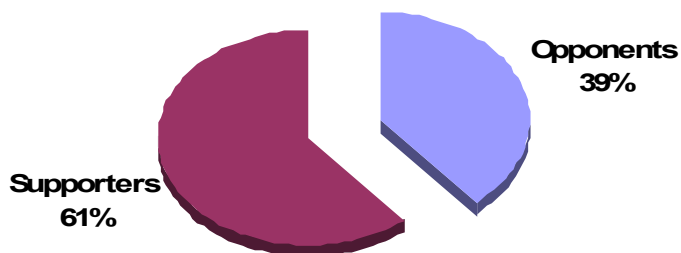


Meeting Attendance: 48 people

Completed Surveys: 40 people

Survey Results

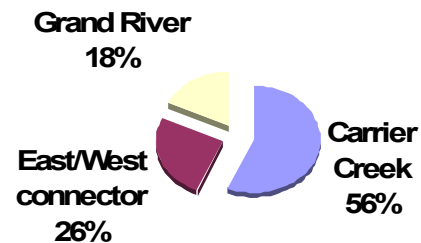
Combined survey percentage results



Combined percentages of supporters and opponents including meeting and website surveys

Percentage breakdown of individuals who oppose a specific route/path location on the non-motorized transportation plan.

Opponent percentages for disapproved routing areas





Proposed Traffic Calming Techniques

- Lane Conversions
 - Criteria for Lane Conversions
 - Less than 18,000 ADT (average daily trips)
 - Benefits
 - Pedestrian/Bicyclist
 - Pedestrian has fewer lanes to cross
 - Bicyclist have a dedicated bike lane
 - Slows vehicles down an average of 5 mph



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Proposed Traffic Calming Techniques

■ Benefits cont..

Vehicles

- Reduces vehicle weaving and side swipe crashes
- Separates left turns and thru movements and can reduce rear end crashes
- Can change function or roadway to "access" oriented
- Eliminates vehicle passing and can lower speeds
- Cost is minimal because re-striping cost is minimal

Intersection Capacity

	<u>EXISTING</u> 5 - Lanes Peak Hour Traffic			<u>PROPOSED</u> 3 - Lanes Peak Hour Traffic			<u>PROPOSED</u> 3 - Lanes Peak 15 Minutes		
	AM	Noon	PM	AM	Noon	PM	AM	Noon	PM
Snow @ St. Joeseeph	71%	70%	74%	77%	74%	80%	94%	76%	83%
Snow @ Michigan	67%	65%	69%	74%	80%	90%	92%	83%	98%

▪ Two intersections have been studied for feasibility in Delta Township

▪ Phase I

- Snow Road N.Michigan 16,649 ADT 1996
- S.Michigan 14,445 ADT 1996
- Michigan Ave. W.Snow Rd. 7,470 ADT 2002
- E.Snow Rd. 13,781 ADT 1995
- St. Joe Hwy. W.Snow Rd. 9,584 ADT 1993
- E. Snow Rd. 15,909 ADT 1998

▪ Future Phases

- Willow Hwy. 2,006-8,247 ADT 2000
- Canal Rd. 5,341-8,584 ADT 2001
- Elmwood Rd. 3,696-6,234 ADT 1996



Case Studies

City of East Lansing, Michigan

- Burcham Drive (Converted in 1996)
 - 41-44 feet drive
 - Average daily traffic volume approx. 8,400

- West Grand River Avenue (Converted in 1997)
 - 46 feet wide
 - Average daily traffic volume approx. 18,000

- Abbott Road (Converted in 1999)
 - 40-45 feet wide
 - Average daily traffic volume approx. 16,100



What was the effect of the changes?

Preliminary Study Results:

- Traffic crashes on Abbott reduced by approx **37%** (I.E. 40 before to approx. 25 after)
- In general, on Abbott average speeds remained the same and the 10 mph pace lowered by 5 mph.
- Traffic crashes on West Grand River reduced by approx. **22%** (1995 & 1996 totaled 118 crashes vs. 1999 & 2000 total of 92)
- Traffic crashes on Burcham Drive reduced by approx. **5%** (1994 & 1995 totaled 41 crashes vs. 1999 & 2000 total of 39)

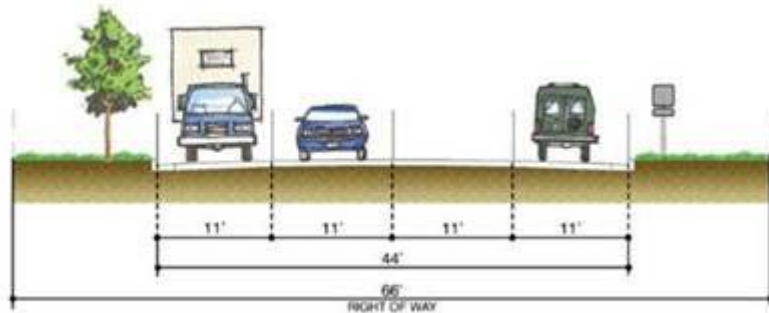


Mid-Block Crossings

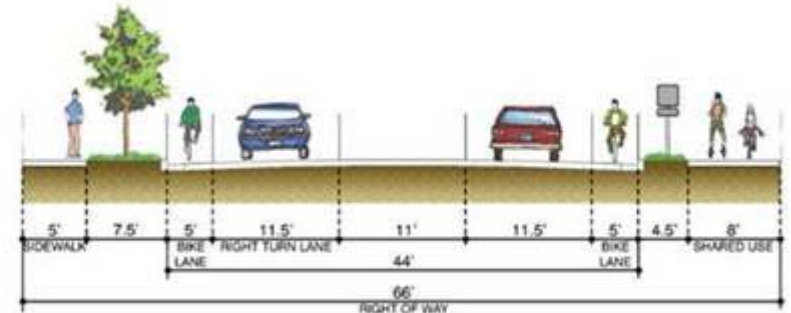
■ Key Issues

- Effective at school sites (crossing guards preferred)
- Provide a marked crosswalk
- Install pedestrian crossing signage
- Recommend a safe haven/island in the middle of the road

Typical Lane Conversions

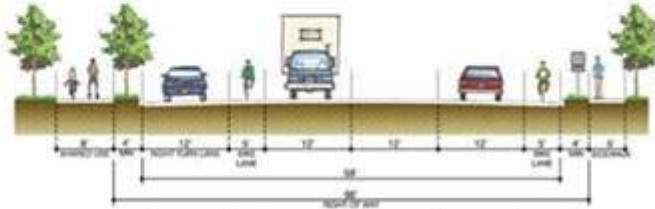


EXISTING 4 LANE ROAD

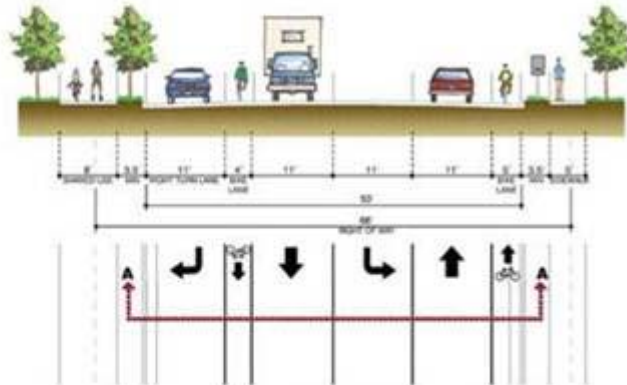


PROPOSED 3 LANE CONVERSION

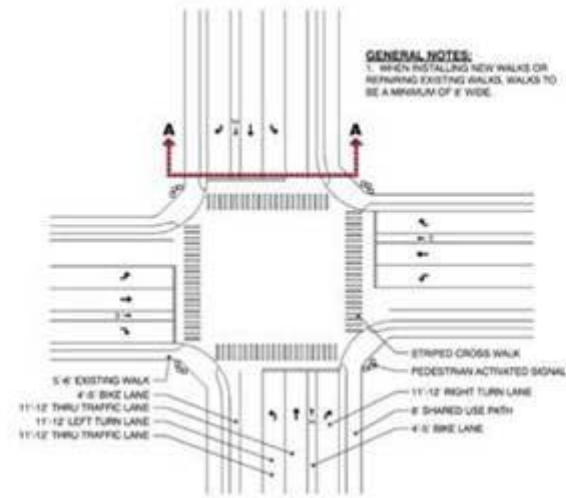
TYPICAL LANE CONVERSIONS



MAXIMUM ROAD CROSS-SECTION
0-100' FROM INTERSECTION



MINIMUM ROAD CROSS-SECTION
0-100' FROM INTERSECTION



TYPICAL INTERSECTION IMPROVEMENTS
5 LANE TO 4 LANE CONVERSION

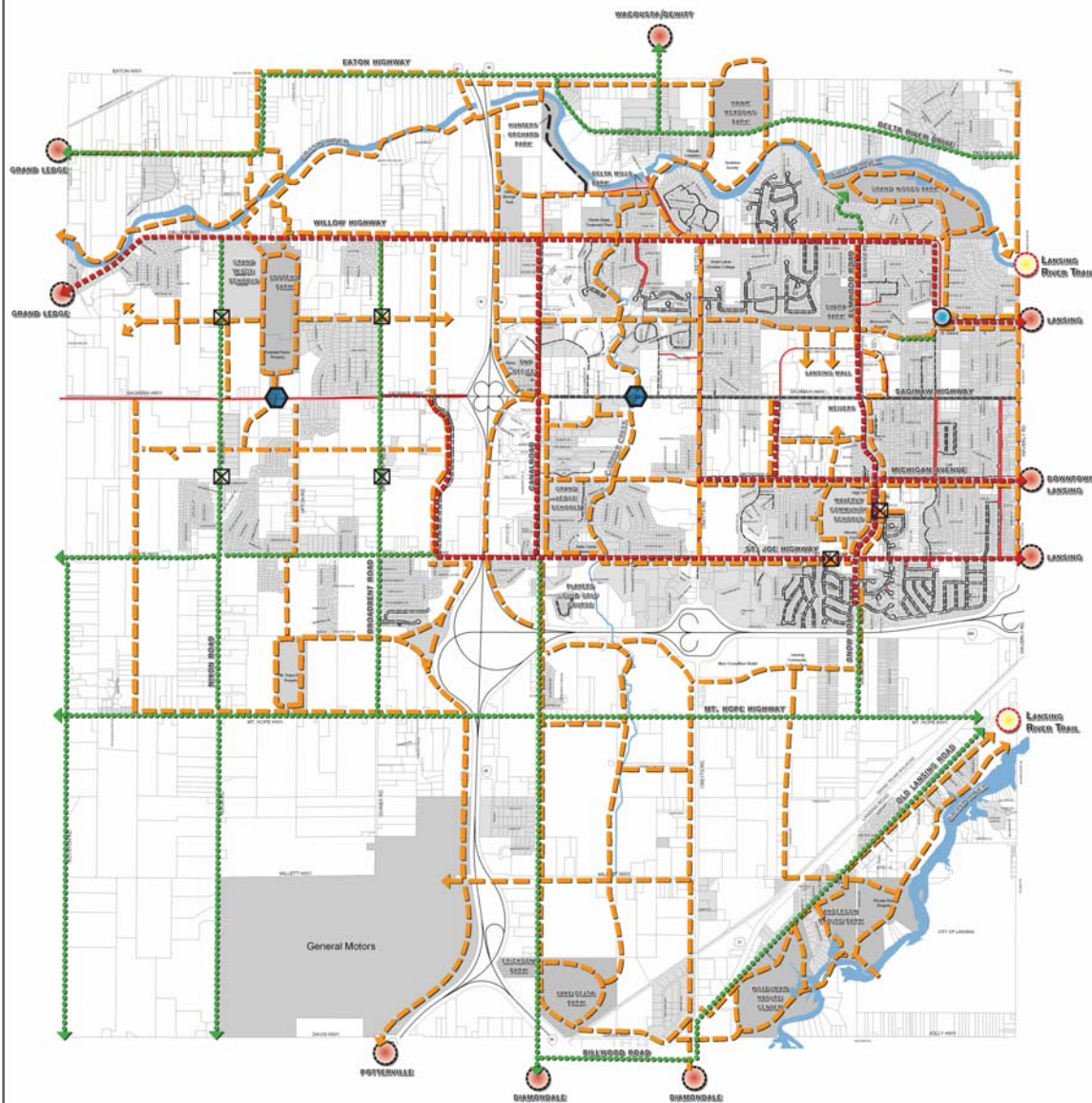


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MULTI-USE ROUTING PLAN



LEGEND

- - - - - PROPOSED LANE CONVERSION
- - - - - PROPOSED BIKE LANES
- - - - - PROPOSED SHARED USE PATH
- - - - - EXISTING SHARED USE PATH
- X PROPOSED MID-BLOCK CROSSING
- X PROPOSED PEDESTRIAN BRIDGE OVERPASS
- PROPOSED SIDEWALK
- - - - - EXISTING SIDEWALK
- X POSSIBLE FUTURE TRAIL CONNECTION FOR DELTA TRAILS
- X POSSIBLE COMMUNITY CONNECTION FOR DELTA TRAILS
- X POSSIBLE TRAFFIC ROUND-A-BOUT

Base Information Provided by the Delta Chapter, Lansing Engineering Department

**PRELIMINARY PLAN
JANUARY 20, 2004**

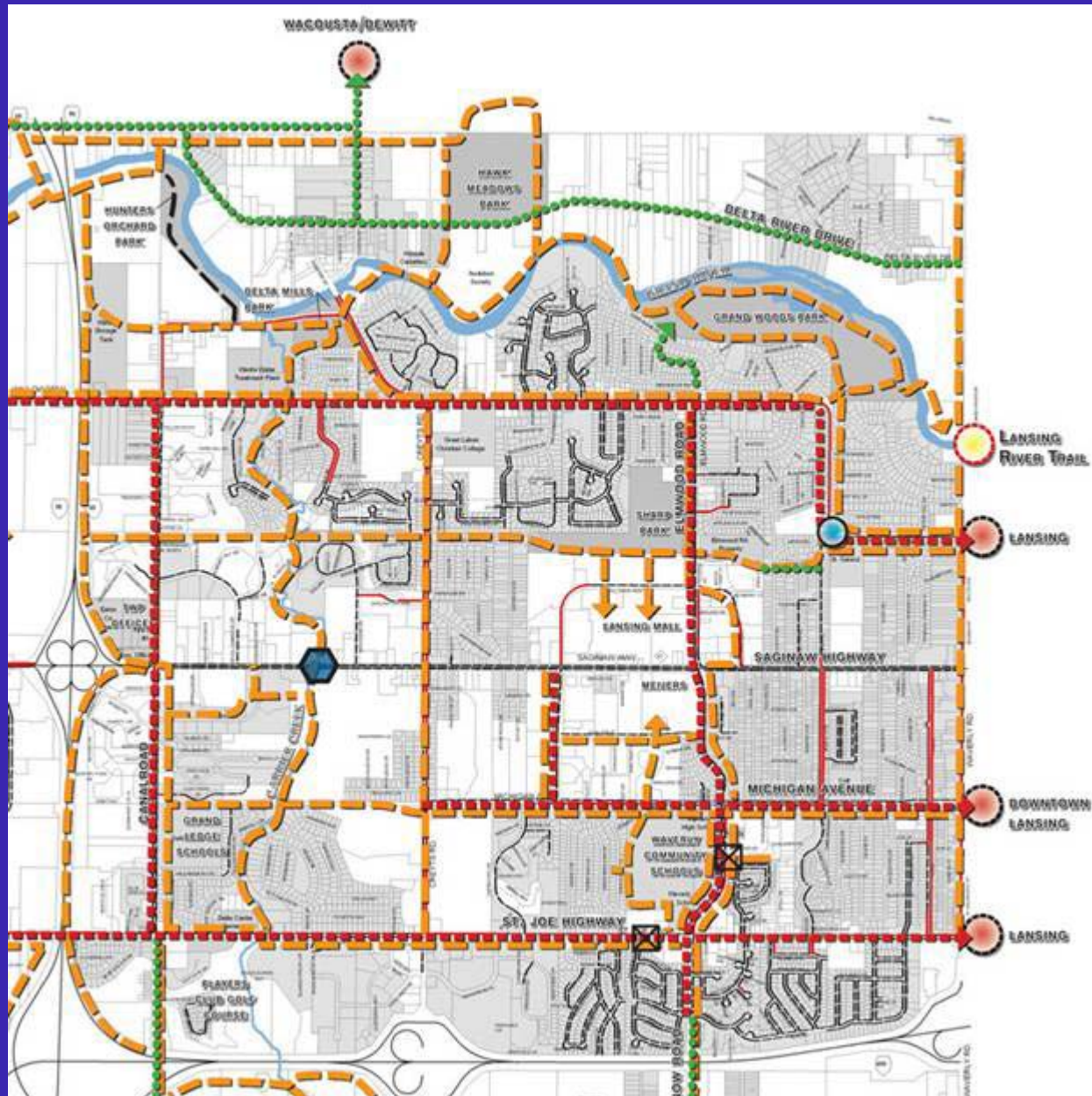


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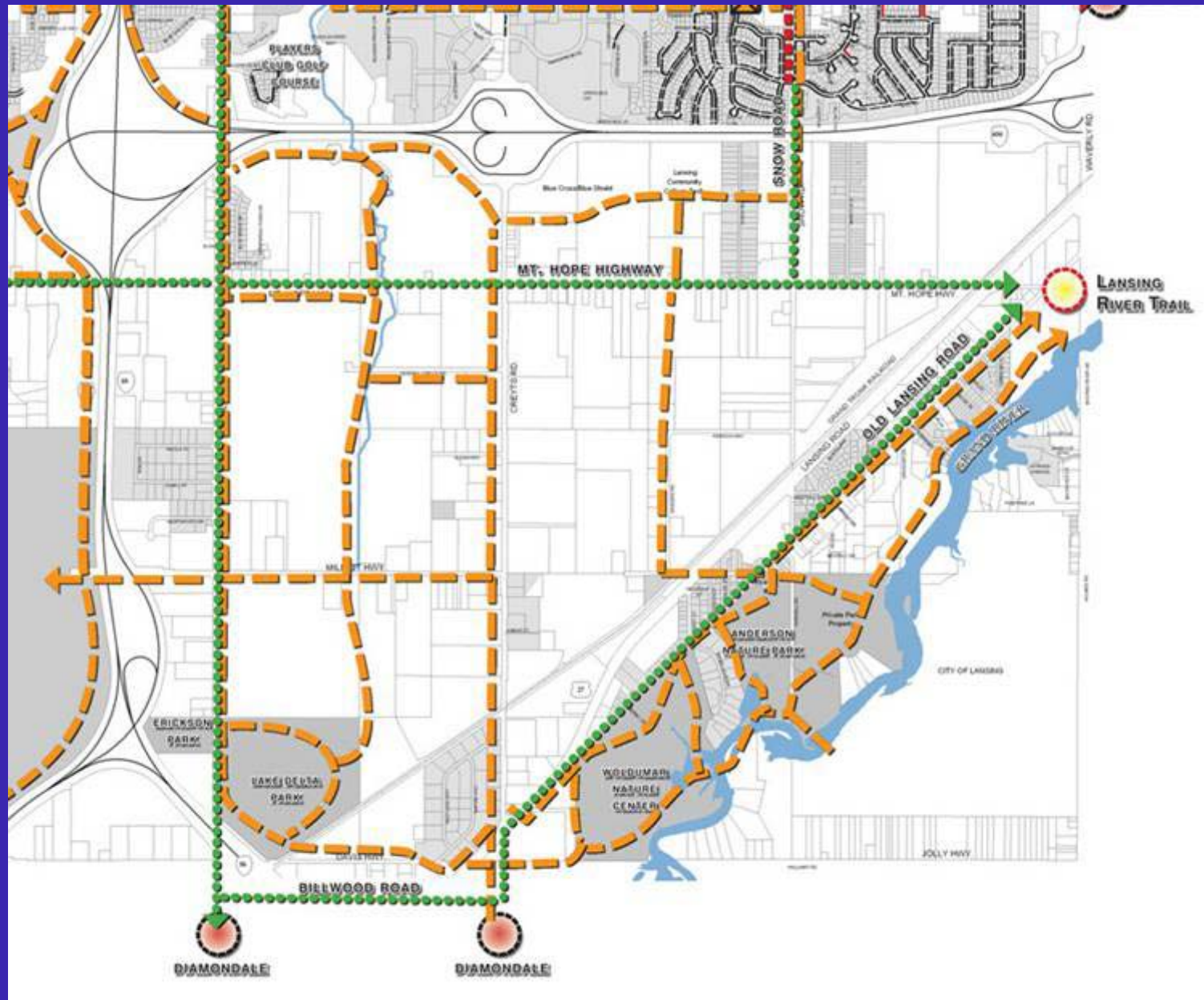
Routing-NE Quadrant



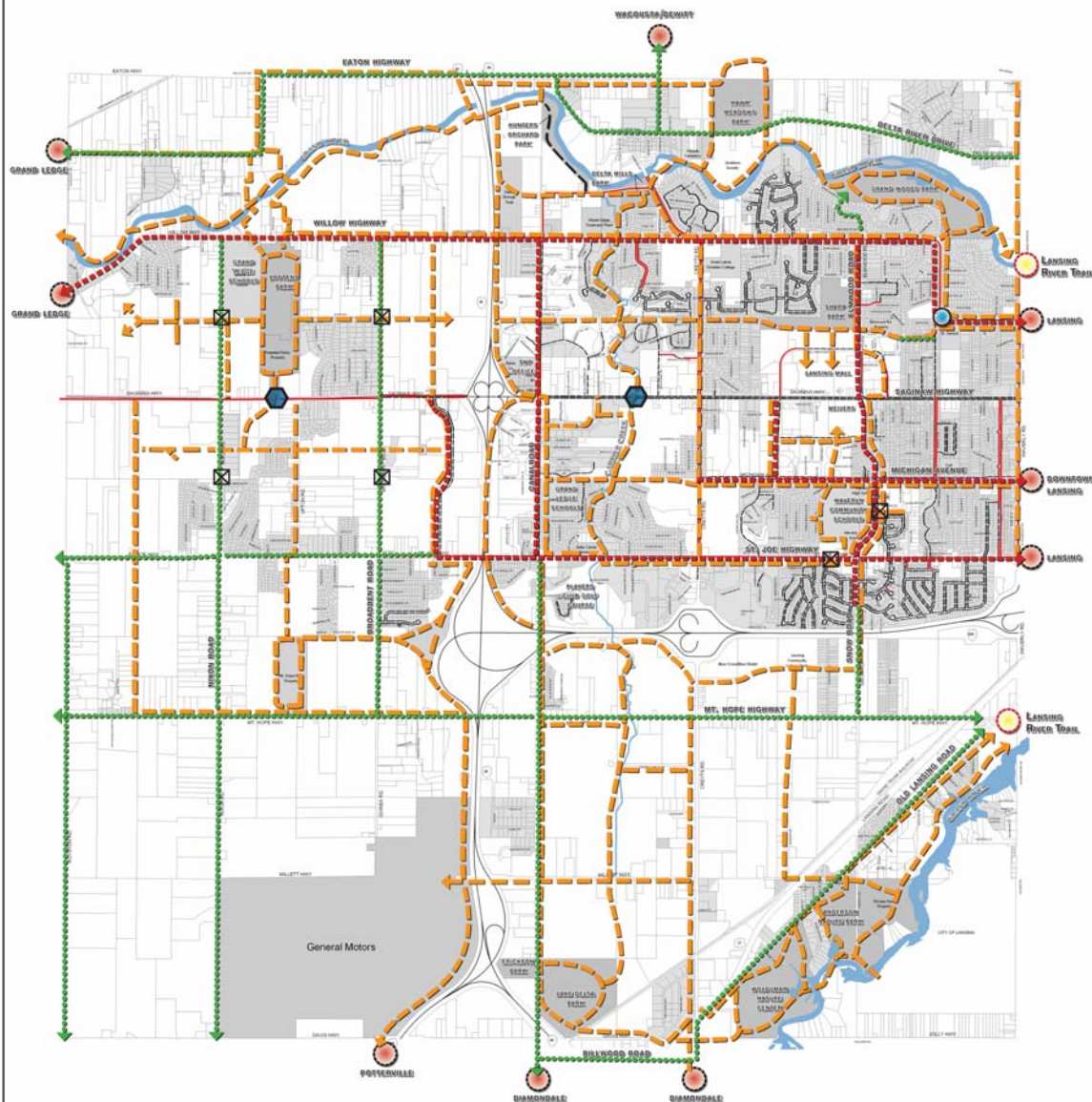
Routing-SW Quadrant



Routing-SE Quadrant



MULTI-USE ROUTING PLAN



LEGEND

- - - - - PROPOSED LANE CONVERSION
- - - - - PROPOSED BIKE LANES
- - - - - PROPOSED SHARED USE PATH
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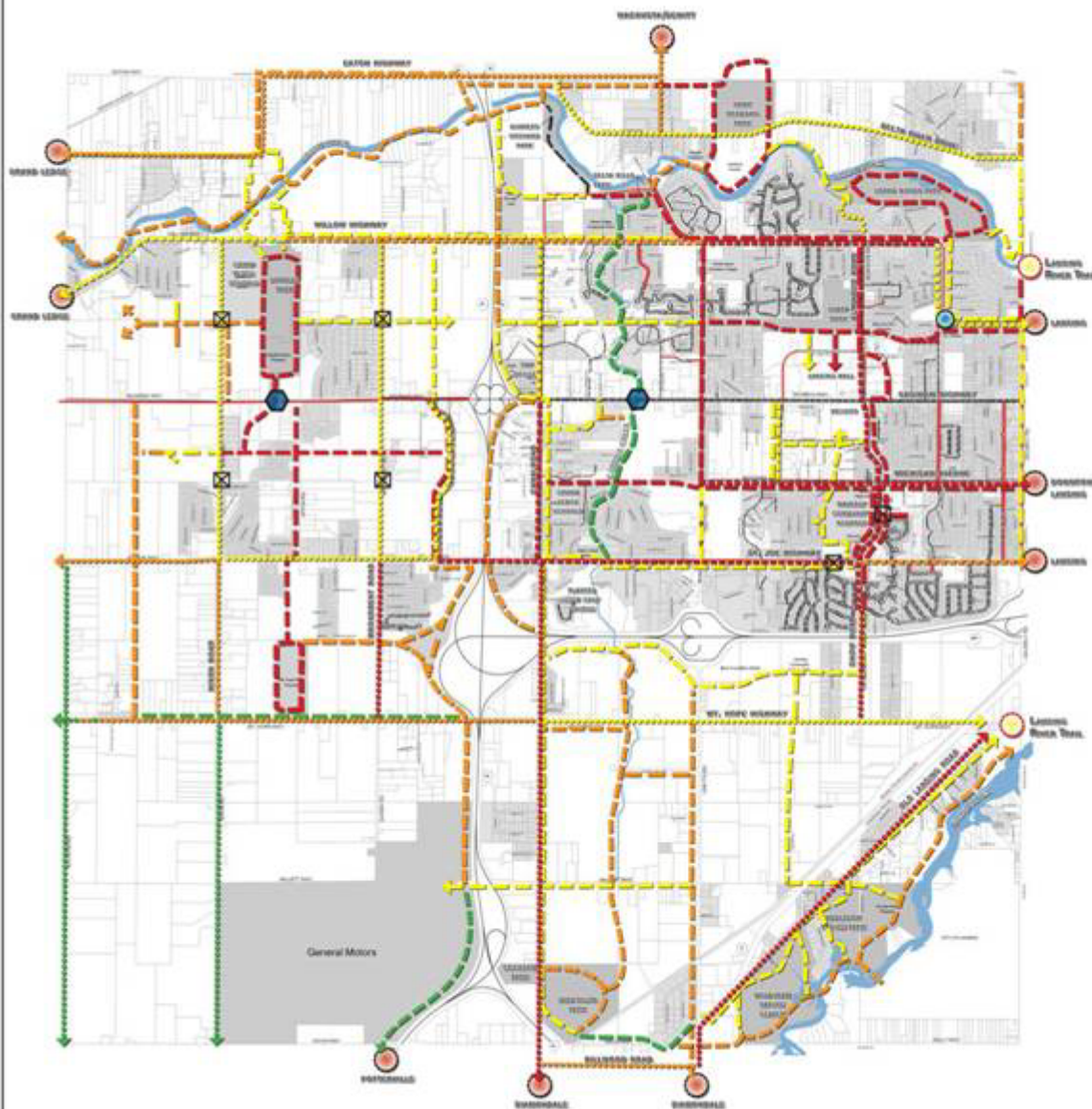


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MULTI-USE PHASING PLAN



LEGEND

- PROPOSED LANE CONVERSION
- PROPOSED BIKE LANES
- PROPOSED SHARED USE PATH
- EXISTING SHARED USE PATH
- PHASE I
- PHASE II
- PHASE III
- PHASE IV
- PROPOSED MID-BLOCK CROSSING
- PROPOSED PEDESTRIAN BRIDGE OVERPASS
- PROPOSED SIDEWALK
- EXISTING SIDEWALK
- POSSIBLE FUTURE TRAIL CONNECTION FOR DELTA TRAILS
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**PRELIMINARY PLAN
JANUARY 20, 2004**



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DELTA TRAILS

Delta Township

Non-Motorized Transportation Study

Preliminary Plan Presentation

Thank you !